

A Brownfields Toolkit

From Brownfields to Super Bowl Theme Park in Jacksonville, FL

Spring 2005: Super Bowl XXXIX got off to a rousing start for participants in Jacksonville's NFL Experience. The interactive theme park, offering games, displays and entertainment, among its many attractions, was barely recognizable as the site of the former Jacksonville Electric Authority (JEA) Southside Generating Station.

Forty-two acres on the south bank of the St. Johns River in downtown Jacksonville were transformed into a scenic playground. Until recently, the site was home to the JEA Southside Generating Station (SGS), a power-generating facility producing electrical power for Jacksonville residents since the 1950s. With concurrence of the U.S. EPA and the Florida Department of Environmental Protection (FDEP), the facility was designated a state brownfields area by the City of Jacksonville in April 2001. Subject to closure, post-closure and corrective action requirements under the Resource Conservation and Recovery Act (RCRA) and the Hazardous and Solid Waste Amendments (HSWA), a decision was made by JEA to voluntarily decommission the plant in October 2001.

Environmental closure of the SGS site was performed jointly under RCRA and the Brownfields Redevelopment Program administered by the FDEP. Following the execution of a Brownfields Site Rehabilitation Agreement, which incorporate an existing Consent Agreement, between JEA and the State of Florida and with EPA Region 4 oversight, an intensive and often challenging cleanup process began. This one-of-a-kind agreement for the RCRA site allowed JEA to participate in the economic incentives under the Brownfields Redevelopment Program.

Pollutants on the site included lead, arsenic and PCBs. Oil that once fueled the generator had seeped as much as 10 feet into the ground. The old power plant was imploded and approximately 263,270 tons of soil was hauled off to hazardous waste landfills. Another 23,500 tons containing chemically treated lead were hauled to a conventional landfill. The entire site has been covered with 2.5 feet of imported backfill that meets residential soil cleanup criteria as required by the FDEP.

Excavation also revealed several artesian wells that had to be capped to protect groundwater. New shallow and deep aquifer groundwater wells were installed and damaged ones replaced. Approximately \$25 million were spent on demolition, disposal, cleanup and other onsite environmental activities.

The Jacksonville site has been described as one of the most scenic venues in the NFL Experience's 14-year history. Visitors to the 850,000 sq. ft. temporary village experienced much more than the scenery. More than 50 interactive games helped fans gear up for the big event. Participatory activities afforded them opportunities to pass, punt and kick with the pros. For women, there were instructional seminars explaining the rules of the game and a clinic for cheerleaders interested in honing their kicking skills.

There were abundant activities for younger fans as well. Some 2,000 underprivileged fifth graders from 18 schools across Jacksonville participated in "Kids Day." Activities ranged from face painting to getting photographed for a souvenir *ESPN Magazine* cover to romping on the field with such NFL luminaries as former Jacksonville Jaguar Keenan McCardell and the Washington Redskins' Patrick Ramsey.

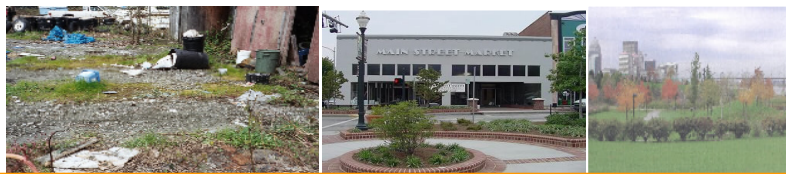
The NFL Experience is a charitable endeavor produced by the National Football League. The interactive theme park, set up annually in the Super Bowl host city, has attracted more than two million visitors.

An admission fee of \$15 for adults and \$10 for children included all games and attractions. This year's proceeds were earmarked for support of the Youth Education Center in Jacksonville.

Cleanup of JEA Park is just one part of a larger brownfields initiative to revitalize Jacksonville's downtown and other urban areas.

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From Health Risk to Health Services Provider in Clearwater, FL

The North Greenwood neighborhood sits less than a mile north of downtown Clearwater, Florida. The area is an African-American enclave whose history reaches back to the earliest years of the 20th century. The neighborhood began to decline in the 1960s. But beginning in the late 1980s and continuing through the 1990s, led by civic and community leaders and supported by the City of Clearwater, the neighborhood began to turn itself around. In 1995, a retired nurse and neighborhood resident founded the North Greenwood Health Resource Center, at the time consisting of two refurbished apartments. In 2003, construction began on the new North Greenwood Health Resource center complex, on the site of a former gas station and garage that had been long vacant.



The brownfield property was purchased by the City of Clearwater with state brownfields funds. The Florida Department of Environmental Protection and the City of Clearwater entered into a Southwest District Brownfields Site Rehabilitation Agreement (BRSA) and worked cooperatively to see the project through its remediation process. The City carried out site assessments, which found excessively contaminated soil. A waste oil underground storage tank (UST), a 4000-gallon UST, a 2000-gallon gasoline UST, 500-gallon kerosene UST and a hydraulic lift were excavated and removed in March 1999. A concrete underground grease trap was also found during excavation. More than 400 tons of petroleum-contaminated soil were removed and transported to a thermal treatment facility.

As part of the City's environmental justice plan, representatives of North Greenwood participated in redevelopment planning and voted unanimously for the city to lease the property to the nonprofit clinic. On March 18, 2000, ground was broken for the Greenwood Community Health Resource Center. Now, the North Greenwood neighborhood has a new health facility offering immunizations, physicals, tests and screenings, flu shots, and counseling to residents of the neighborhood.

This project shows how public support of basic services can be done in a way which also allows communities to meet important brownfield cleanup and revitalization objectives. In North Greenwood, it was a community voice and visionary who recommended that City officials lease the former gas station site to the Greenwood Community Health Resource Center for \$1 a year for 30 years. The State of Florida provided \$200,000 to help pay for the cleanup of underground storage tanks and removal of contaminated soil. Another \$320,000 in state funds paid for construction of the new facility. The State also provides support for the clinic's operating costs.

In short, the Greenwood Community Health Center is a model clinic designed to assist low income residents in the Clearwater area in obtaining adequate health care screenings and education. It is a vital

example of how revitalization of a former brownfields can enhance a community in a way that extends far beyond economic value.

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Building a Soccer Field of Dreams on a Landfill in Wilmington, NC

The Cape Fear Youth Soccer Association (CFYSA) in Wilmington, North Carolina recently sought room to build soccer fields to accommodate the community's surging interest in youth soccer. Their search ended with the purchase of a former landfill that will become a regional soccer park.

Over the last decade, CFYSA saw participation increase from 800 kids on 46 teams to 4,000 kids on more than 200 teams. As a result, adequate field space became a major issue. Teams play on fields spread throughout Hanover County that were shared with schools and the parks and recreation department. CFYSA had to compete for field space with other worthwhile uses and the fields were often overused and in disrepair.

Due to the scarcity of remaining large tracts of open space suitable for athletic fields in Hanover County, land prices were exorbitant and sites were not centrally located. The least expensive tract was more than \$5,000 per acre and was located in the northern end of the County. However, CFYSA learned of the availability of the 65 acre former Flemington Landfill site through the North Carolina Brownfields program. The site had been idle for twenty years, had caused some contamination of the groundwater, and was a significant community eyesore. Now complete, the Wyandotte Shores Golf Course property includes a park with a riverfront walkway and observation decks, picnic areas, jogging trails, and a rowing club.

The site was significantly cheaper than other available properties (\$400 per acre). It is ideally located near the City of Wilmington's riverfront with easy access to major transportation corridors, and, unlike much of the land in the area, 100 percent was usable because there are no wetlands on site.

When CFYSA first considered the Flemington site, it had the typical concerns and reservations about contamination of the soil. However, significant tests of the soil conducted over the years by state and local agencies, and the North Carolina Brownfields program alleviated their concerns. In addition, the CFYSA has worked closely with the state Department of Environment and Natural Resources to develop a plan to ensure that any landfill contaminants are capped and isolated so they pose no danger to human health or the groundwater.

When fully developed, the Cape Fear Soccerplex will contain 14 competition fields, an office/conference building for the CFYSA, a concession building, maintenance facility, first aid facility, picnic shelters, playgrounds, parking for 800 vehicles, and a 1.5 mile jogging trail. The Soccerplex will host tournaments throughout the year and local officials anticipate a \$4-7 million positive impact on the local economy per tournament.

State Representative Danny McComas, the primary sponsor of the state of North Carolina's Brownfields legislation said, "This shows what can happen when common-sense legislation is enacted.

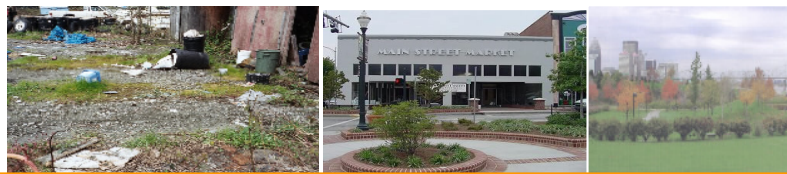
This project is a result of a collaborative effort between environmentalists, regulatory authorities and business." In other words, this project was a big score, and a win-win for all involved.

Construction began in 2005 and CFYSA hopes play will begin in 2006.

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Louisville, KY Reclaims its Riverfront 2002 Phoenix Awards Winner

Thirty years ago, Louisville's waterfront was notoriously blighted. The proliferation of junk and scrap yards along the Ohio River earned it the unflattering moniker, "Junk City," and its main claim to fame was that it was used for the car-crushing scene in the James Bond movie "Goldfinger." The area was also cut off from the rest of the downtown by a six lane elevated highway. In addition to the visual blight, both the soil and groundwater in the area were polluted with a vast array of contaminants.

In 1990, the Louisville community launched a visioning process to help chart a course for the City's future. The community recommended that the city break out of the mold of a 9-to-5 city, and instead make Louisville a 24-hour city where people could work, play, and live. To accomplish this goal, the community came up with a Master Plan that focused on the City's many advantages, and one of the highest priorities was to reclaim the waterfront. Soon after, a public/private partnership launched an effort to begin reclaiming the waterfront beginning with the cleanup of a 72-acre parcel. Louisville Slugger Field, a minor league baseball stadium, and a new 55 acre urban park, aptly named Waterfront Park, were chosen as the new uses for the area.

The area was marred by a range of contaminants left behind from more than 150 years of industrial uses. The most seriously contaminated soils were removed from the area and, where possible, lightly contaminated spots were contained or subjected to a pump-and-treat-process with long-term monitoring to ensure the natural attenuation of the contaminants.

The Waterfront Park was dedicated in 1999 and today over 1.25 million people visit each year for concerts, fireworks, festivals, and general recreational uses. The park features a beautiful great lawn for games and concerts, a festival plaza for special events, an extremely popular children's play area, and a sculpted linear park with picnic areas, groves of trees, walking and jogging paths, a boat docking area, and breathtaking views up and down the Ohio River.



Before

Louisville Slugger Stadium opened in 2000 as the home to the Cincinnati Reds' Triple A minor league affiliate, the Louisville Riverbats. The stadium is incorporated into a historic rail freight depot that dates back to the 1800s and serves as the stadium's entrance. The depot houses retail and restaurant space. The stadium seats 13,000 and attracted 668,000 visitors in its first two years of operation. Together these waterfront redevelopment projects have generated millions of dollars in private investment, including the rehabilitation of abandoned or under-utilized buildings, the creation of new waterfront housing opportunities, and new office space.

Louisville and the Louisville Waterfront Redevelopment Commission have completed work on Phase II of the Waterfront Park. This second phase added approximately 35 acres to the park, including another, much larger, children's play area, a small cafe, a rowing facility for school and community rowing groups, and an amphitheater. A pedestrian connection to Southern Indiana across the old Big Four railroad bridge is planned for Phase III.

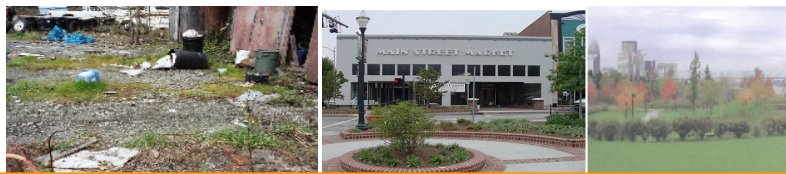
Louisville's waterfront project won the 2002 Phoenix Award Grand Prize for Excellence in Brownfield Development and serves as a model for successful waterfront brownfields revitalization. More importantly, the city has a new, welcoming face and has shaken the "Junk City" image.

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After



A Brownfields Toolkit

National Park Service — Creating an Underwater Brownfields Experience in Charleston, SC

On Charleston's waterfront, a 1.5 acre contaminated site that was formerly owned by the National Park Service has been redeveloped as the home for the 69,000 square foot South Carolina Aquarium.

The aquarium site is within the 18 acre Calhoun Park Area that runs along the Cooper River. The property consisted primarily of mudflats that were filled in by the Navy to provide additional space to work on small boats during World Wars I and II, but then sat idle for nearly 50 years. Over that time, the site was impacted by uses on surrounding properties. A manufactured gas plant operated on an adjacent site, which from 1855 to 1910 also housed a coal gasification plant. Over the years a saw mill, chemical company, creosoting plant, paint manufacturer, fuel company, and retailer of coal, wood, and coke all operated near the site. The National Park Service obtained the site from the Department of Defense in 1987.



In 1984, Mayor Joseph Riley announced plans for an \$8 million, 30,000 square foot aquarium in downtown Charleston. However, it was determined that the proposed downtown location for the aquarium would have exacerbated an already congested traffic area and an alternative site was sought. After an extensive search, the brownfield site owned by the National Park Service was chosen for its ideal location near downtown and along the waterfront. To prepare the site for redevelopment, the City began excavation to improve the site's drainage. In 1991, the excavation of the site revealed significant creosote contamination. EPA investigated the site and designated it a Superfund Accelerated Cleanup Model (SACM) site, which meant that the site would be treated as if it were on the National Priorities List (NPL) of federal Superfund sites. As a result of this determination, the National Park Service was concerned with the liability issues associated with the property and reluctant to lease the property to the City.

To overcome these barriers, the City worked with EPA, the South Carolina Department of Health and Environmental Control, the National Park Service, and other federal agencies to negotiate an effective plan for assessment, cleanup and redevelopment. As a result of those discussions, the Park Service agreed to give the City a 50-year lease on the property. In all, it took eight years to assess the site, two years to implement the cleanup plan, and four years to build the project. The aquarium finally opened in May of 2000, more than 16 years from the date it was originally proposed.

The aquarium has been a tremendous asset to the community, employing a staff of 110 and 450 volunteers. From May 2000 to May 2002, the aquarium had 1.3 million visitors and in its first seven months brought in \$8.8 million. The redevelopment has also spurred brownfield revitalization at

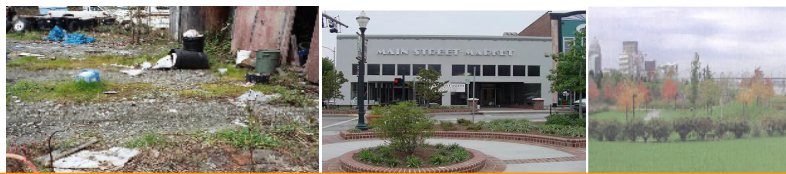
neighboring sites along the river. However, the aquarium has many other benefits beyond its significant economic impact. It serves as an educational and environmental resource center with exhibits on the five major aquatic ecosystems in South Carolina. The aquarium has established an education program that allows elementary and secondary school students to attend the aquarium for free, provided they participate in programmed lessons prior to and after their visit. In 2002, the aquarium also received a Phoenix Award for community impact.

According to Charleston Mayor Joseph P. Riley, "We now have an important state asset in the South Carolina Aquarium, a valuable environmental tool to educate our citizens about the importance of our regional environment, and another opportunity for waters edge access for our residents and visitors."

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Recycling Land for Recycling's Sake Spartanburg, SC

When Carolina Recycling Group, LLC (CRG) opened its Nazareth Church Road plant in 1997, it became the first company in South Carolina to successfully return a site to productive use under the State's brownfield program.

The Batchelder Blasius plant first began aluminum recycling and smelting operations in 1966. When it filed for bankruptcy in 1990, this facility left behind mounds of slag and ash, more than 600 drums of used oil, seven unclosed underground storage tanks, and 27 above ground tanks containing more than 40,000 gallons of chemical waste and processed oil. With no assets to maintain the property, the Batchelder Blasius Company abandoned the maintenance of the 5-acre landfill that it had used to dispose of magnesium chloride and slag waste (a smelting byproduct). A Site Screening Investigation by the South Carolina Department of Health and Environmental Control (DHEC) in the following months also detected elevated levels of ethyl benzene and chloromethane derivatives and heavy metals in groundwater and soil samples.

Despite the extensive contamination, CRG expressed interest in purchasing the 42-acre abandoned property. Since it had been home to a metal processing facility for 24 years, the site offered the infrastructure necessary to accommodate CRG's industrial needs. The property was strategically located near interstates and sat directly on a main CSX rail line. The old Batchelder Blasius furnace building was ideal for protecting scrap from the rain. Four acres of concrete along with a double lined collection system attached to an oil water separator were already in place.

In 1996, CRG became the first party to negotiate an agreement through South Carolina's Voluntary Cleanup Program (VCP). This arrangement protected CRG from being held liable for the contamination that existed at the site at the time of purchase. In exchange for this safeguard, CRG agreed to contribute to the cleanup of the contaminated property. Among the requirements outlined in the VCP contract were: (1) the maintenance of the landfill cap and replacement of soil and vegetative cover in needed areas; (2) the closing of seven underground storage tanks (USTs) in accordance with DHEC UST regulations; (3) the removal and proper disposal of the oil from an abandoned oil tanker; and (4) the preparation and implementation of a groundwater sampling plan that will monitor levels of contamination in existing and new monitoring wells.

The Carolina Recycling Group spent approximately \$1.5 million to assess, remediate, and renovate the property. The corporation received assistance from South Carolina DHEC, Carolina First Bank, the Southeastern Regulatory Resolution Alliance-a Department of Energy Program, Spartanburg County, and the Southeastern Environmental Resource Alliance. Thanks to these strong partnerships, CRG finished the bulk of the cleanup and redevelopment in 1997, more than a year ahead of schedule. CRG now enjoys the benefits of a state-of-the-art, environmentally friendly metal processing and recycling facility. Turnings and other oily scrap are completely under roof. Oil and other liquids are

collected by a double lined collection system in the floor of the building, which is attached to an oil water separator and treatment system. All liquids entering this system are recycled as fuel or primary wash water for equipment. More than four acres of concrete and 80,000 square feet under roof, allows for the storage and processing of material without coming into contact with the soil. In 2000, CRG received a prestigious Phoenix Award for its innovative approach to brownfield redevelopment.

Since the remediation, the CRG's annual sales have grown from \$15 million to approximately \$93 million in 2003. The company has added seven additional operating locations throughout the Southeast and a total of 235 employees. The operations recycled more than 478,929 gross tons of ferrous and nonferrous metals in 2003. Because of the success of the Spartanburg project, CRG decided in 2002 to invest more than \$10.5 million in new processes on the brownfield site. This success has encouraged others to consider Brownfield redevelopment. Since working with CRG, the South Carolina DHEC has entered into 64 additional Voluntary Cleanup Contracts with non-responsible parties. These agreements will help preserve South Carolina's open space and bring economic vitality back to urban areas.

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Regional Coalition Seeks to Channel New Development to Urban Corridor in Southeast Florida

The Eastward Ho! Brownfields Partnership is a regional collaboration that aims to revitalize Southeast Florida's historic urban areas in an effort to lessen development pressure and urban sprawl in environmentally sensitive lands to the west of the Interstate 95 corridor which are critical to the Everglades ecosystem and the region's water supply. Focused on reducing market disincentives to infill development, promoting smart growth, and bringing economic activity back to neglected areas, this partnership is targeting the approximately 2,100 brownfields sites that dot the urban landscape. The remediation and sustainable reuse of these sites will assist in the protection and restoration of the Everglades' fragile ecosystem and could result in more than \$6 billion in savings for the region over the next 25 years.

Bringing together local, state, regional, and federal agencies with private sector, non-profit and community organizations, Eastward Ho! targets a 115-mile coastal strip of Southeastern Florida. This corridor includes forty percent (5.2 million) of Florida's total population. It runs through Broward, Dade, and Palm Beach counties and includes the major downtowns of Miami, Fort Lauderdale, and West Palm Beach. While the entire region is not characterized by poverty, it contains pockets of some of the most severe poverty in the country.



More than 2 million people are expected to settle in the Eastward Ho! corridor over the next 15 to 20 years. This projected influx poses a significant threat to the nearby Everglades, which are rapidly shrinking as low density development continues to push westward. Such sprawling, automobile-dependent growth comes at a cost to the local economy, in addition to the environment. The state will face billion-dollar roadway projects in order to accommodate the population increase.

In an effort to accommodate future population growth without further compromising or degrading the environment and economic sustainability of the region, the Eastward Ho! initiative focuses on funneling people back into the urban areas of Southeast Florida. The partnership is realizing this goal by providing technical assistance and funding to local governments, conducting research, undertaking demonstration projects, providing information to the public, and leading community workshops. A number of successful community redevelopment efforts have received assistance from the Eastward Ho! partnership. The Wynwood Brownfield Project is one such endeavor that has brought new life to Miami's blighted Wynwood neighborhood. Originally home to a laundry and dry cleaning facility, this five-acre property had significant legal and environmental problems. It had been the target of illegal dumping of a number of drums containing unknown material. Assessment of the site found detectable levels of petroleum compounds and groundwater contaminated with "bunker C" fuel oil. In addition to the environmental challenges, the property was tied up in a Nevada bankruptcy court, there was an IRS

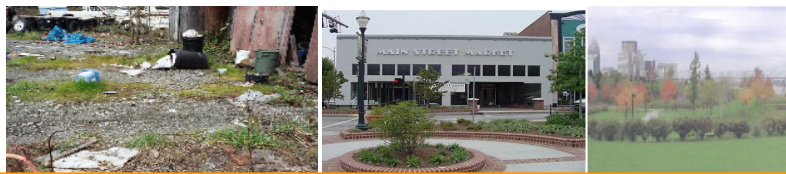
lien against it, several years of back taxes were owed, and a creditor had a judgment lien in excess of \$1 million.

The successful revitalization of the Wynwood site is primarily a result of a strong partnership between government, private business, and the community. In 1996, the City of Miami received an EPA grant to assist in the redevelopment of the brownfield. Three years later the city acquired a Florida brownfields grant to assist with the assessment and remediation efforts. To resolve the legal and technical hurdles associated with the property and make the redevelopment financially feasible, Miami collaborated with the Eastward Ho! Brownfields Partnership, Atwater Capital Group, Congresswoman Carrie Meek, the Miami Brownfields Task Force, Miami Department of Real Estate & Economic Development, Miami-Dade County Oversight Committee, Florida Department of Environmental Protection, and the Miami-Dade County Department of Environmental Resources Management.

Atwater acquired the site through bankruptcy court and signed the first “Brownfields Site Rehabilitation Agreement” under the Florida Brownfields Redevelopment Act. Since the completion of the remediation, one parcel of the property has become a new MetroMix cement plant, providing 40 much-needed jobs for the neighborhood. The rest of the site has been sold to British developers and is slated to become live/work artist studios.

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Alabama's Five Mile Creek Greenway Partnership: Communities Coalesce in Cleanup Effort

A historic alliance of Jefferson County and the cities along Alabama's Five Mile Creek set in motion an ambitious plan to clean up and revitalize a waterway that once had the reputation of being "the most polluted stream" in the state. In fact, local residents named it "Creosote Creek" because of the smell of chemicals emanating from the Black Warrior River tributary. A master plan for the waterway envisions a 25-mile greenway along the creek's banks suitable for biking, hiking, fishing and canoeing that will serve as a magnet for ecotourism, as well as new capital investments in adjacent communities.

Five Mile Creek is one of the few streams in the state not suitable for fishing and swimming, under federal guidelines. The presence of creosote, a brownish oily liquid consisting chiefly of aromatic hydrocarbons produced by the distillation of coal tar, has been a major impediment to the revitalization of Five Mile Creek. Another redevelopment deterrent is dead fish littering the waterway, a consequence of cyanide and other industrial toxins routinely discharged into the creek.

Cleaning up the waterway posed some seemingly insurmountable challenges. The first was forging the necessary alliances to formulate a plan. The cities and towns along Five Mile Creek were considered unlikely partners for such an alliance. Many of them have higher-than-average poverty and unemployment rates, and budgets that don't include planners or even park renovations.

To the surprise of many observers, all of the north Jefferson County towns along the creek have formed a partnership to collaborate on the cleanup and redevelopment of a 25-mile stretch of adjacent land. The principal facilitator of this partnership was the Black Warrior-Cahaba Rivers Land Trust organization established to implement the Jefferson County Greenways project, a \$30 million land acquisition program designed to protect riparian corridors along area rivers and streams.

The Land Trust signed a Memorandum of Agreement with six municipalities—Birmingham, Center Point, Tarrant, Fultondale, Brookside, Graysville—and other organizations to establish a greenway and parks system along the Five Mile Creek stream. The Land Trust owns approximately 600 acres of land within this watershed and, with its partners, is pursuing additional acquisitions. Specifically, the coalition aims to improve and enhance water quality, improve the physical health of area residents, and provide recreational amenities in economically challenged communities.

An editorial in the Birmingham News applauded the partnership, stating, "These are not towns with deep pockets in search of a project to eat up a budget surplus. They are small towns whose leaders simply want to build a legacy for future generations."

Yet, despite the advantage of an attractive location with presumably good redevelopment potential, the presence or potential presence of hazardous substances or pollutants from industrial and mining activities and concomitant liability issues have stymied the land acquisition initiative and thereby stalled

the redevelopment plan. Site assessments are indicated when properties intended for public use may contain hazardous environmental constituents.

An EPA Brownfields grant provided funding for Phase I and Phase II assessments on selected sites in the greenway project. Final selections will be made with community input to determine site eligibility, impact on water quality, economic redevelopment potential, recreational value, and overall contribution to development of the greenway.

Meanwhile, the Five Mile Creek Greenway Partnership got a head start on its cleanup effort. In the town of Brookside, the coalition recruited some 200 volunteers and 15 sponsors in the first ever community cleanup of the waterway. The volunteers pulled 14 tons of debris from the creek, much of which was deposited by a flood in 2003.

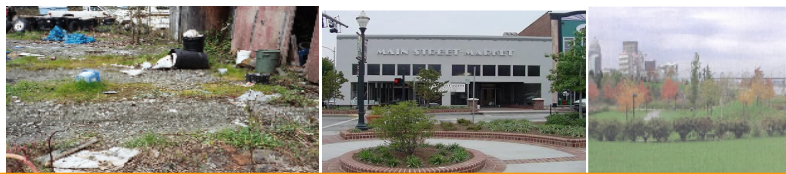
Fortified with a \$200,000 EPA Assessment Grant and an enthusiastic corps of volunteers, the Partnership envisions walkable and livable communities with new job and investment opportunities along Five Mile Creek in the not too distant future.

"Thanks to those who chose to look beyond its polluted shores, Five Mile Creek has a bright new future as a community asset," said Wendy Allen Jackson, executive director of the Black Warrior-Cahaba Rivers Land Trust.

The Five Mile Creek Greenway Partnership was awarded the "2004 Partnership Project of the Year Award" from the Board of Directors for the Black Warrior – Cahaba Rivers Land Trust. The project was recognized for looking beyond the creek's bad reputation and seeking ways to improve water quality and their communities through the development of a network of parks and greenways along its shores.

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A Brownfields Toolkit

Neighborhood Partnership Brings Revitalization in Spartanburg County, SC

Within Spartanburg County, the Arkwright and Forest Park neighborhoods tell an important story of deterioration and revitalization. They are adjacent to two Superfund-caliber sites: the former International Minerals and Chemicals (IMC) fertilizer plant and the Arkwright dump. Also located nearby are an operating chemical plant, an operating textile manufacturer, concrete production businesses, and other commercial and industrial facilities. Because of a lack of zoning restrictions and few land use controls in the area, these sites are near residential housing and, in some cases, share fence lines with homeowners.

During the 1990s, criminal activity around the IMC site alarmed nearby residents. While investigating what could be done to combat crime, resident Harold Mitchell discovered that a number of environmental contamination complaints about the IMC site had been filed with the South Carolina Department of Health and Environmental Control. This discovery led to neighborhood-wide discussions of the health risks the site might pose. These neighborhoods had a history of high death rates from cancer and respiratory diseases, as well as high rates of infant mortality, miscarriages, and birth defects. As awareness of the hazards grew, so did momentum to get the site cleaned up.

In 1997, Harold Mitchell founded ReGenesis, a community-based environmental justice organization, to provide leadership and to represent neighborhood interests in an effort to assess and clean up the two sites. ReGenesis worked with the EPA and the state environmental agency to assess levels of contamination, and to create a plan for cleanup. During these discussions, the idea of redeveloping Arkwright and Forest Park gained support. As the focus of ReGenesis evolved, the organization continued to link other entities from the public and private sectors to the revitalization efforts. Several public forums in 2000 brought together stakeholders from federal and state agencies, businesses and industry, universities, and other interested parties and ultimately led to the formation of the ReGenesis Environmental Justice Partnership. Two local partners — Spartanburg County and the City of Spartanburg — joined with ReGenesis to form a core steering committee for the partnership. In addition to Mitchell representing ReGenesis, Elena Rush, Director of Spartanburg County's Community and Economic Development Department (CEDD), and Mike Garrett, former city engineer for Spartanburg and current public works director for Spartanburg County, made up the partnership.



The partnership has brought considerable external funding to the area. It has garnered nearly \$7.5 million in grant funds for the community, and in July 2004, the Spartanburg Housing Authority received more than \$20 million in HOPE VI funds which will be used to improve housing in and around the ReGenesis Project Area. An additional \$79 million in leveraged resources has been committed for construction of 501 new housing units, community and supportive services, and business development

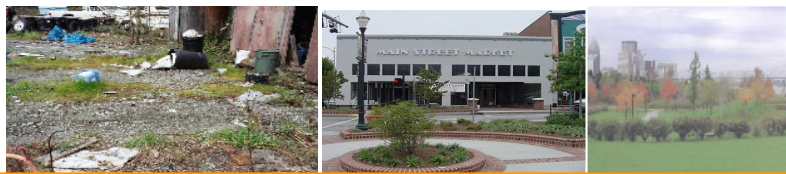
for small and minority construction businesses. In addition, 267 of the new housing units will be constructed on one of six recently assessed brownfield sites. In 2002, the City, County, and ReGenesis signed a memorandum of understanding (MOU) that details the roles and responsibilities of each entity in revitalizing Arkwright and Forest Park, also limiting the liability of each organization to the value of the grants received. Hartmann comments, "Essentially, we wanted to have a formal agreement institutionalizing the expectations of ReGenesis, the city, and the county."

In the few short years since its formation, the partnership has achieved much, including the establishment of the ReGenesis Community Health Center (CHC) in 2003. The CHC serves not only the residents of Arkwright and Forest Park but also the greater Spartanburg community. In the first three months of its operation, CHC staff reported treating nearly 2,400 patients. Stakeholders in the partnership also helped secure "weed-and-seed" funding from the U.S. Department of Justice to help tackle criminal activity in the neighborhoods. Six brownfields sites have been assessed as part of a major redevelopment plan for the area. Through the ReGenesis partnership, the Spartanburg area hopes that per capita income can be raised, new jobs created, more investments made in children and children's education, and housing quality improved. Everyone stands to benefit if the vision of the ReGenesis partnership can be turned into an economic reality.

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A Brownfields Toolkit

Atlanta, GA Turns Dixisteel Into Atlantic Station 2004 Phoenix Award Winner

With a population that has doubled since 1980 and accounts for more than half of Georgia's residents, the Atlanta metropolitan area is the fastest growing city in the Southeast. Atlanta is also the least dense urbanized area of the top 15 metropolitan areas in America, characterized by sprawling, low density patterns of development and traffic congestion that is among the worst in the country. With an expected increase in population by an additional 2.5 million people in the next 25 years, the sprawling development patterns must be addressed to ensure a sustainable future.

While the closure of the Atlantic Steel Mill in 1998 after nearly a century of producing "Dixisteel" cost the area thousands of jobs, it also presented a tremendous opportunity. The location of the 138-acre site in midtown Atlanta and in close proximity to major transportation and transit routes made the site a prime location for a new smart growth urban development project. Today, the Atlantic Station community is a model of smart growth that provides its residents with multiple options to "live, work, and play" all within walking distance.



1930's Aerial Photo

Jacoby Development Inc. acquired the property in 1997 with hopes to revitalize and redevelop the 138-acre site. AIG Environmental provided cost overrun insurance for the remediation of the land and in 1999 AIG Global Real Estate Investment Corp. became a co-developer and investor. Together, Jacoby and AIG Global Real Estate proposed a 12-million-square-foot, mixed-use redevelopment plan for the Midtown Atlanta site. However, the site was separated from the east side of midtown Atlanta and the MARTA transit line by a major highway. Before the redevelopment move forward the 17th Street Bridge and interstate ramps had to be built to provide sufficient access to the site via automobile and public transit. Unfortunately, because Atlanta was out of compliance with federal transportation conformity requirements, the state was not allowed to use federal funds to add to its highway system nor construct transportation projects that require federal approval even if they were not federally funded.

The EPA entered into a Project XL agreement with the developers, to address the ban on transportation infrastructure. Project XL, "eXcellence and Leadership", is a program that "allows states and local governments, businesses and federal facilities to develop with EPA innovative strategies to test better cost-effective ways of achieving environmental and public health protection." Under the agreement, development of the site would have to include interchanges and bridges for cars, pedestrians, bicycles, and buses to serve as essential links to Atlanta's mass transit system, MARTA. The goal of the agreement was to create a connection between the Atlantic Station community and public transportation to reduce growth of traffic in Atlanta and its negative impacts on air and water quality.

The next hurdle was cleaning up the site. The developers partnered with the Georgia Department of Natural Resources Environmental Protection Division (EPD) to develop a \$10-million plan to remediate the site's extensive contamination. The developers conducted a risk-based site assessment to determine the level of cleanup needed at the site, which included: the removal of more than 9,000 truckloads of impacted soils; construction of erosion/stormwater controls and barriers to prevent exposure to soil that remained on-site; surface water runoff controls; prevention of groundwater contamination at other sites; and creating institutional controls to prevent future exposure to contamination. Remediation of the former Atlanta Steel mill site was finished in December 2001 when the State issued a "no further action" letter.

In 2000, construction began. The plan for the site calls for it to be divided into three areas, the District, the Commons, and the Village. The District, a portion of which opened in March 2004, will feature one million square feet of open air retail and entertainment, six million square feet of office space, 150,000 square feet of loft office space, and 200 two story loft apartments above retail shops and restaurants. The Commons will be primarily residential with a mix of apartment buildings, and low-rise condominiums built around a new park and fountained lake, all within walking distance of the retail and office space located in the District. The Village will consist of retail shops and cafes with residential units above. To help defray the costs of infrastructure improvements to prepare the site for the redevelopment, the City of Atlanta approved the Atlantic Steel Tax Allocation District (TAD), a tax increment financing overlay that will allow the property taxes generated by the redevelopment to be used for property improvements for the next 25 years. The TAD is expected to generate \$35 million per year and will allow the developers of the site to sell bonds to cover additional property improvement costs. In July 2004, Atlantic Station received a green building certification for an office tower by the U.S. Green Building Council. Atlantic Station's official Grand Opening was held in October 2005.



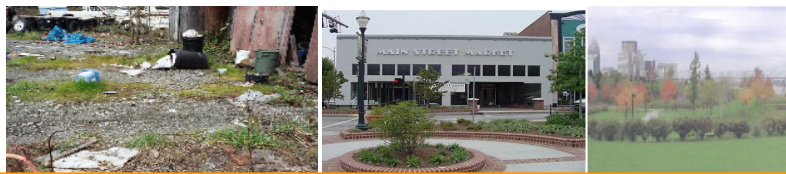
2005 Aerial Photo



In addition to cleaning up a contaminated site, the reuse of this urban infill property and integration of other "smart growth" tools into the design of the Atlantic Station community will help improve air and water quality for all of metropolitan Atlanta. An EPA analysis of the transportation and air emissions impacts of the project compared to a similar development in an outlying Greenfield area found that the Atlantic Station redevelopment will result in 34 percent fewer vehicle miles traveled (VMTs) and up to 45 percent fewer NOx emissions. By using smart growth tools to revitalize this large urban brownfield site, Atlanta is investing in a sustainable future for the metropolitan region.

Website:

www.atlanticstation.com



A Brownfields Toolkit

Rural Community of Cowpens, SC Becomes a National Model

Town of Cowpens, South Carolina, is proving true the adage that small towns come together when there is a crisis. A manufacturing plant closed in 1990, this town of 2,000 was faced with the loss of more than 400 jobs, as well as an abandoned building containing unknown amounts of contamination.

The 228,000-square-foot clothing plant was once the largest employer in Cowpens secured by an agreement between the county and the manufacturer's parent company to guarantee \$10 million in industrial revenue bonds. When the parent firm sold the clothing company to a group of investors who shut down the Cowpens plant in 1990, the clothing company defaulted on the industrial revenue bonds, leaving the county holding title to the abandoned property.

Inside the dormant facility, town officials discovered 85 drums of industrial chemicals, with no responsible party to pay for cleanup. Operations at the plant had also contaminated the site's groundwater with tetrachloroethene, a substance similar to dry cleaning fluid-and to add to the problem, the former plant is located between the town's elementary and middle schools. Contamination prevented developers from buying and making any attempt to clean up and redevelop the site.

To help the town address these problems, EPA awarded Cowpens a \$200,000 EPA Brownfields Assessment Pilot Grant in May 1997; the town was one of the first small communities in the country to win such an award and services were aimed at the revitalization of the abandoned plant.

A national environmental cleanup company agreed to test the contents of the 85 drums and remove them from the site. The drum removal was performed free of charge in December 1997. This was just the start of many contributions from the community. A local environmental company performed an asbestos and lead paint survey on the facility and estimated the costs associated with cleanup. This was approximately \$25,000 worth of free service. A local roofing company conducted an evaluation of the roof, estimated to cost \$5,000, also free of charge. A video survey of the facility's sewer line, locksmith services, and environmental contest award money from the Lions Club were also conducted.

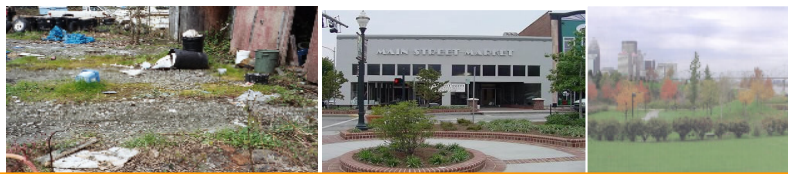
The Pilot also leveraged funding from the University of South Carolina at Columbia, which provided \$55,000 for technical services related to the design and development of a proposed Industrial Ecology Park on the 70-acre site. The \$1,500 the town provided to initialize the Cowpens Development Corporation Fund. Study worth \$5,000, and Clemson University conducted a Retail Business Survey worth \$5,000; both free of charge. In addition, the U.S. Army Corps of Engineers expended approximately \$40,000 to conduct a groundwater sampling investigation on the site and in the surrounding community where contaminated groundwater was believed to have migrated. A \$6,000 grant was secured toward emergency response ground studies and electromagnetic surveying.

All of these contributions were realized due to the dedication of the town leaders and the project leader. More of the EPA brownfields grant money was put towards the complex soil and groundwater investigations that were necessary at the site. Critical to the plan was the formation of the Cowpens Development Corporation and their taking title to the property. The South Carolina Department of Environment & Health Control worked to resolve issues related to the contaminated groundwater at the site.

The Town is hoping that its successful approach to this former manufacturing site can serve as a model for brownfields redevelopment in small communities across the country.

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A Brownfields Toolkit

Saving Georgia's Sea Turtles on Jekyll Island, GA

Saving the sea turtles has long been a major concern of Georgia conservationists. Sea turtles have existed unchanged for more than 100 million years, but most of us have never seen one. Female sea turtles come to shore specifically to lay their eggs, but males never return unless injured.

There are thousands of sea turtles requiring medical care and rehabilitation, resulting in an overpopulation of existing treatment facilities. More than 70 sea turtles have washed up on Georgia's beaches in just one month. Lacking a rehabilitation center in the state, injured sea turtles have to be transported to Florida. That is, if Florida has room for them.

Florida has 15 treatment facilities, but they are not always able to accommodate Georgia's needs. Neither are North Carolina and South Carolina, which have one facility each.

Public awareness of the plight of Georgia's sea turtles could change soon with the proposed Jekyll Island Sea Turtle Center, a medical treatment and rehabilitation facility for the endangered species. Project planners are one step closer to the realization of their goals with recent funding made available through EPA's Targeted Brownfields Assessment (TBA) program.

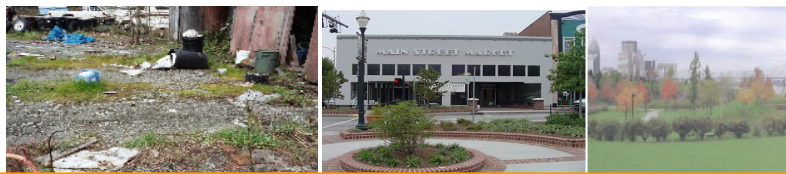
Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. TBA funding, in the amount of \$82,000, will be used to conduct Phase 1 and Phase 2 environmental site investigations on the Jekyll Island property, formerly a coal-fired power generating plant. Environmental concerns include mercury and other metals found in ash, lead and chromium associated with wall paint, and acid drainage from battery storage on a concrete pad.

The Jekyll Island Sea Turtle Center will combine elements of conservation, historic preservation and public education. Students from across the state and the eleven-county coastal zone will have an opportunity to learn first hand about marine science and sea turtle conservation, as well as the history of Jekyll Island.

Jekyll Island, the sixth largest of Georgia's barrier islands, is surrounded by the Atlantic Ocean and the Intercoastal Waterway. It is a land replete with live oaks, Spanish moss, wildlife, and natural flora. Sixty-five percent of the island remains undeveloped, protected by a Georgia land preservation law.

The land reuse proposal was developed by the Jekyll Island Foundation, the Jekyll Island Authority, the Wildlife Conservation Society at St. Catherines Island, and the Georgia Department of Natural Resources (Coastal Resources and Wildlife Resources Division). The TBA will be administered by the State of Georgia.

Source: www.epa.gov/region4/waste/bf/bqsept2004.pdf



A Brownfields Toolkit

Land-of-Sky Regional Council in Asheville, NC Takes On Brownfields with Regional Planning

The Land-of-Sky Regional Council in North Carolina is utilizing some exciting and innovative tools to address environmental issues in the region, including technical and financial assistance to local governments and potential brownfields property owners. Additionally, they have been successful in removing certain barriers to the redevelopment of brownfields properties by assisting property owners in obtaining liability protection when merited.

A multi-county local government planning and development organization, Land-of-Sky is one of 18 such organizations in the state. It serves a region that includes the counties of Buncombe, Henderson, Madison and Transylvania. The region is characterized by a mixture of isolated rural areas, small towns, urban communities, and rapidly growing suburban or “fringe city” areas, with a combined population of 344,472. In its mission statement, Land-of-Sky Regional Council commits to “work with local governments, the Region’s leadership and state and federal agencies to foster desirable social, economic, cultural and ecological conditions” in the counties served.

Regional Councils lend a “competitive advantage” to small and rural communities that find themselves vying with large cities for limited state and federal funding, said Ron Townley, Senior Planner for Land-of-Sky. By pooling their expertise and resources in the largely Appalachian region, local governments unable to underwrite new initiatives can pursue state and federal grants to address critical environmental issues.

Through its Regional Brownfields Initiative (RBI)—a partnership of economic developers, local officials, bankers, environmental planners, realtors and community members—the Council has assumed an active role in brownfields redevelopment. The RBI is an outgrowth of a Brownfields workshop hosted by the Council at a local convention center. A follow-up survey indicated a preference among participants for processing Brownfields grant applications through the regional council. The Regional Brownfields Initiative crosses jurisdictional boundaries to forge multiple and diverse partnerships that will serve the region on a long-term basis.

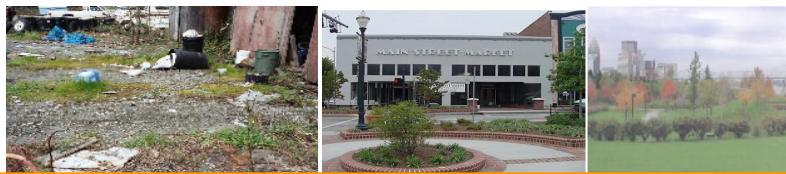
Land-of-Sky’s RBI is guided by its Brownfields Advisory Group. Members of the Advisory Group are local officials, community organizations, business owners, and regulatory and legal experts, among others. The Advisory Group identifies properties with possible contamination that have good redevelopment potential. Besides site selection, five workgroups select and oversee the work of consultants and a financial manager, and conduct an education and outreach program.

In its initial proposal to the U.S. Environmental Protection Agency, two areas were targeted for Brownfields assessment grant applications. One area, the French Broad Riverfront adjacent to

downtown Asheville, borders neighborhoods with the highest poverty rates and lowest median family incomes in Buncombe County. The other, an abandoned lumber treatment facility in the Town of Fletcher, is slated to become the new town center and central business district. Land-of-Sky was awarded two new assessment grants of \$200,000 each in 2004, and revolving loan fund grants totaling one million dollars.

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A Brownfields Toolkit

Selma, AL Uses Brownfield Redevelopment to Sustain Small-Town Heritage

When one thinks about rural America's landscape, the word "frontier" comes to mind. Just as the definition of the word frontier suggests, rural America is the compilation of regions at or beyond the edge of settled areas. These regions are often considered to be largely undeveloped or depending on one's view, underdeveloped.

As the U.S. edges toward the projected population of nearly 400 million in 2050, these rural regions are bound to keep growing. Within these regions some small metropolises, not quite rural, are cropping up and more or less functioning in rural isolation.

Micropolitan Statistical Areas

In response to this phenomenon, the U.S. Office of Management and Budget developed a classification to quantify growth and allows these small cities to enable statistical consolidation with metropolitan areas, as needed. It's called the micropolitan statistical area, and generally encompasses a county that has at least one urban population cluster with a minimum of 10,000 and a maximum of 49,999.

Simply stated, a micropolitan area is a functioning small community isolated from other metropolitan areas. In addition, the definition identifies cities and includes well-distanced suburbs, where many city-employed people have their homes. These micropolitans are sometimes referred to as "commutersheds."

There are currently 674 counties with micropolitan areas, according to a USDA Economic Research Service 2003 report. These micropolitan areas tend to retain a common residential preference for small-town, healthy living that is neither large-urban nor completely rural and are at a distance from metro areas. The residential small-town preference makes managing growth and combating sprawl a top priority.

Often, these growing micropolitan areas rely on the expertise of local government planning divisions or regional planning organizations such as a council of governments (COG) to ensure that transportation and community development growth designs keep quality of living standards intact. Many of these local or regional planning divisions have found that redeveloping brownfields preserves the small-town lifestyle that attracted residents in the first place.

Selma, Alabama

The rural-urban continuum community of Selma, Alabama (population 20,512) is one of these micropolitan areas. The town has used brownfield redevelopment to sustain their small-town persona and heritage and to improve their environment.

Selma is tucked away some 45 miles west of Montgomery and 80 miles south of Birmingham. Overlooking the Alabama River, Selma is part of the Alabama-Tombigbee river economic development region and is the only micropolitan among the rural region's ten counties. Selma was founded in 1820. Since then, the small city has been the site of many historic events, including Dr. Martin Luther King Jr.'s launching of the 1965 voting rights marches. During the Civil War it was one of the South's main military manufacturing centers.

Selma houses the largest historic district in Alabama. Mayor James Perkin Jr., elected in 2000 as Selma's first black mayor and re-elected in 2004 commented, "A heritage as rich as ours ought to be preserved and redeveloping brownfields allows us the luxury to do just that. It also makes our communities healthier, brings the community together and gives us the economic stepping-stone we so badly need in our rural environs."

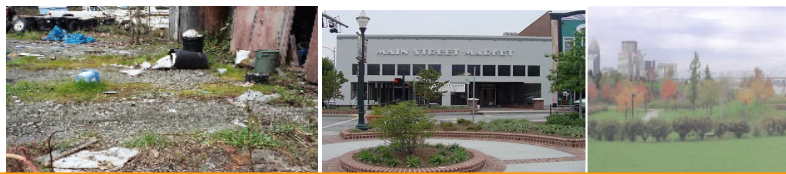
Selma's economic standing has been on a steady decline since 1978 when Craig Air Force Base closed and a domino effect of manufacturing shutdowns ensued. One of those idled sites was the 50-acre Honda All-Lock plant, which was gifted to the City.

When the City received an EPA brownfields grant in 2001, they prioritized the Honda plant and two other sites. They got to work and got the plant redeveloped. The plant is now occupied by Meadowcraft Inc., which produces outdoor furniture. Approximately 200 new jobs were created, and the two-year lease agreement will essentially cover the redevelopment costs.

Selma also received a 2002 Underground Storage Tank grant to reclaim three former gas stations. The overall brownfields revitalization objective in Selma is being met, which is to sustain the small-town feel and honor its heritage while managing growth.

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A Brownfields Toolkit

Seminole Tribe of Florida – Tribal Response Program

The Seminole Tribe of Florida received their first Section 128(a) State and Tribal Response Program Brownfields Grant in September of 2004. Activities supported under this program include the timely survey and inventory of brownfields sites on Tribal lands, remediation of pollution, public participation, approval and verification of a cleanup plan, and maintaining the Public Record.

Detail of these activities include:

Timely Survey and Inventory of Brownfields Sites in Tribal Land

- Sites have been identified and a database was developed that produces an analysis of the number, graphic distribution and the general characteristics of brownfields on Tribal Lands.

Oversight and Enforcement Authorities

- The Seminole Tribe has been evaluating the Tribe's legal authority to ensure that response actions will be protective of human health and the environment and in accordance with applicable Federal and Tribal Law.
- The Tribe worked with EPA Region 4 to develop a Quality Assurance Management Plan (QAMP), which has been approved.

Mechanisms to Provide Meaningful Opportunities for Public Participation

- The Water Resource Department is currently working on developing policies that will allow the Water Commission to act as the authorized Tribal entity, providing Tribal participation on decisions on brownfields sites within Indian Lands.

Cleanup Mechanisms

- The Tribe is researching procedures to require that all cleanup activities are completed and verified.

Public Record Requirement

- The Tribe has completed a Public Record that is accessible to the public and will be updated at least annually. The record will contain information on remedial actions completed in the past year; planned for the coming year, and any institutional controls used. Geographic Information Systems are being used to identify locations for decision-makers.

Site Specific Activities

- The Tribe plans to continue to conduct assessments of brownfields sites and anticipates that 12-15 new assessments will be completed within fiscal year 2006.

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